

**AB - FR2771133 A**

**NOVELTY** - A filter envelope is placed in a shaft using a flexible and inflatable tubular sleeve (2) which expands radially under internal pressure (P) and a series of radially expandable rings (3) which surround the sleeve at intervals. These elements are initially flexible but can be hardened by polymerisation. The tubular filter envelope (4) surrounds the rings, which are polymerized during inflation.

**- DETAILED DESCRIPTION** - The sleeve can be detached from the filter envelope and the polymerized rings after inflation. The rings are polymerized by heat using the Joule effect, with resistance heaters nested in the sleeve. The assembly is cylindrical, with the rings fitted into grooves in the outer wall of the sleeve. The spacing of the rings is greater than their axial dimension. The filter envelope is made of braided fibers which can retract axially during their radial expansion, or of a permeable and supple membrane rolled to form an open tube. The filter element is subdivided into several independent sections butting at the rings.

**- USE** - Installation of a filter after oil production has started, to remove sand from the flow and thus prevent blockage

**- ADVANTAGE** - The existing system involves installing a metal mesh, which is easy if installed before the production tubing is put in the shaft, but is very difficult after production starts. This flexible device can be easily installed even in non-straight shafts.